

Amendments to and Listing of the Claims:

Please amend claim 1, cancel claims 67-81, and add new claims 82-99 as follows:

1. (currently amended) A method for matching advertisements to subscribers, the method comprising:

receiving advertisement profiles that include traits associated with an intended target market for an associated advertisement;

gathering subscriber data from at least one source, wherein the subscriber data is selected from at least a subset of transactional data, public data, private data, and demographic data;

generating subscriber profiles based on at least a subset of gathered subscriber data, wherein the subscriber profiles predict traits about the subscribers without revealing any private data or raw transaction data associated with the subscribers;

correlating the advertisement profiles with the subscriber profiles; and

selecting targeted advertisements ~~based on said correlating~~that meet a minimum correlation threshold.

2. (original) The method of claim 1, further comprising grouping subscribers having similar subscriber profiles.

3. (original) The method of claim 2, further comprising generating a group profile by averaging the subscriber profiles for all subscribers within the group, and wherein said correlating includes correlating the group profiles with the advertisement profiles.

4. (original) The method of claim 1, wherein said correlating includes forming subscriber groups for at least a subset of the advertisement profiles, each subscriber group including subscribers whose subscriber profiles are most similar to a respective advertisement profile.

5. (original) The method of claim 1, wherein said gathering includes monitoring subscriber viewing activities.

6 (original) The method of claim 5, wherein said generating includes aggregating the subscriber viewing activities to develop subscriber viewing characteristics.

7. (original) The method of claim 5, wherein the subscriber viewing activities include at least some subset of channel changes, volume commands, record commands and EPG commands.

8. (original) The method of claim 6, wherein the subscriber viewing characteristics include at least some subset of program preference, network preference, genre preference, volume preference, dwell time, and channel change frequency.

9. (original) The method of claim 8, wherein the subscriber viewing characteristics are broken out by day part.

10. (original) The method of claim 5, wherein said generating includes

retrieving heuristic rules associated with the subscriber viewing activities; and

applying the heuristic rules to the subscriber viewing activities to generate the subscriber profiles, wherein the subscriber profiles predict traits about the subscriber not captured in the subscriber viewing activities.

11. (original) The method of claim 6, wherein said generating further includes

retrieving heuristic rules associated with the subscriber viewing characteristics;
and

applying heuristic rules to the subscriber viewing characteristics to generate the subscriber profiles, wherein the subscriber profiles predict traits about the subscriber not captured in the subscriber viewing characteristics.

12. (original) The method of claim 6, wherein said generating further includes

retrieving heuristic rules associated with the subscriber viewing activities and the subscriber viewing characteristics; and

applying the heuristic rules to the subscriber viewing activities and the subscriber viewing characteristics to generate the subscriber profiles, wherein the subscriber profiles predict traits about the subscriber not captured in the subscriber viewing activities or the subscriber viewing characteristics.

13. (original) The method of claim 1, wherein the subscriber profiles include probabilistic demographic traits of the subscribers.

14. (original) The method of claim 1, wherein said generating includes retrieving heuristic rules associated with transactional data gathered for the subscribers, wherein the heuristic rules identify traits likely associated with the subscribers performing those transactions.

15. (original) The method of claim 14, wherein the heuristic rules identify traits not readily identifiable with the transaction data.

16. (original) The method of claim 14, wherein the heuristic rules identify demographic traits.

17. (original) The method of claim 1, wherein said gathering includes gathering information from a plurality of distributed databases.

18. (original) The method of claim 17, wherein the plurality of distributed databases includes at least some subset of viewing characteristics, purchasing characteristics, transaction characteristics, statistical information and deterministic information.

19. (original) The method of claim 1, wherein said generating includes generating subscriber profiles in the form of a ket vector.

20. (original) The method of claim 19, wherein the ket vector is represented by:

$$|A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n)$$

$$+ (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n)$$

$$+ \dots$$

$$+ (m_1\omega_1 + m_2\omega_2 + \dots m_n\omega_n)$$

wherein a_1 through m_n represent weighting factors and ρ_1 through ω_n are identification factors selected from at least a subset of viewing characteristics, purchasing characteristics, transaction characteristics, statistical information and deterministic information.

21. (original) The method of claim 19, wherein said correlating includes applying an operator to the subscriber profiles to determine if an advertisement is applicable to associated subscribers.

22. (original) The method of claim 1, wherein said correlating is performed by a secure correlation server.

23. (original) The method of claim 1, wherein said correlating is done by each subscriber.

24. (original) The method of claim 1, further comprising presenting the targeted advertisements to the subscribers.

25. (original) The method of claim 24, wherein said presenting includes presenting the targeted advertisements in avails within program streams.

26. (original) The method of claim 25, wherein the program streams are video program streams.

27. (original) The method of claim 26, wherein the video program streams are television program streams.

28. (original) The method of claim 25, wherein said presenting includes

generating at least one presentation stream for each program stream by inserting targeted advertisements in place of default advertisements within the program streams;
and

delivering the presentation streams to the subscribers.

29. (original) The method of claim 28, wherein said generating at least one presentation stream is performed at a cable television head-end.

30. (original) The method of claim 29, wherein said generating at least one presentation stream includes generating a single presentation stream and said delivering includes delivering the single presentation stream to each node connected to the head-end.

31. (original) The method of claim 29, wherein said delivering includes delivering each node connected to the head-end a presentation stream that is targeted thereto.

32. (original) The method of claim 31, wherein each node receives only a single targeted presentation stream for each program stream.

33. (original) The method of claim 29, further comprising grouping nodes having similar profiles together to form a node cluster, and wherein said delivering includes delivering each node within the node cluster the same presentation stream.

34. (original) The method of claim 34, wherein said grouping nodes is not restrained by geographic proximity.

35. (original) The method of claim 33, further comprising generating a node profile by averaging the subscriber profiles for each subscriber connected to the node.

36. (original) The method of claim 29, wherein said delivering includes

delivering multiple presentation streams associated with a single program stream to each node connected to the head-end,

selecting the appropriate presentation stream for each node, and

delivering the appropriate presentation stream to the subscribers connected to each node.

37. (original) The method of claim 36, wherein said delivering multiple presentation streams includes delivering each of the multiple presentation streams at different frequencies, statistically multiplexed together at a single frequency, or at different wavelengths.

38. (original) The method of claim 29, wherein said delivering includes

delivering multiple presentation streams associated with a single program stream to each node connected to the head-end,

selecting the appropriate presentation stream for each branch of each node, and

delivering the appropriate presentation stream to the subscribers connected to each branch.

39. (original) The method of claim 38, wherein

said delivering multiple presentation streams includes delivering each of the multiple presentation streams at different frequencies, and

said selecting includes mapping the frequency of the presentation streams to appropriate branches.

40. (original) The method of claim 38, wherein

said delivering multiple presentation streams includes delivering each of the multiple presentation streams statistically multiplexed together at a single frequency; and

said selecting includes demodulating the statistically multiplexed presentation streams, routing the demodulated presentation streams, and modulating the routed presentation streams to appropriate branches.

41. (original) The method of claim 38, wherein

said delivering multiple presentation streams includes delivering each of the multiple presentation streams at a single frequency and different wavelengths; and

said selecting includes demultiplexing the presentation streams and forwarding the different wavelength presentation streams to appropriate branches.

42. (original) The method of claim 28, wherein said generating at least one presentation stream is performed at a cable television node.

43. (original) The method of claim 28, wherein said delivering includes delivering, to each subscriber, a single targeted presentation stream for each program stream.

44. (original) The method of claim 28, wherein said delivering includes delivering, to each subscriber, a plurality of presentation streams for each program stream, and further comprising selecting the appropriate presentation stream for display to the subscriber.

45. (original) The method of claim 24, wherein said presenting the targeted advertisements includes

delivering a plurality of targeted advertisements to each subscriber; and

inserting the targeted advertisements within advertisement opportunities in delivered program streams.

46. (original) The method of claim 45, wherein said inserting includes inserting the targeted advertisements based on a queue.

47. (original) The method of claim 46, wherein the queue is delivered to the subscriber.

48. (original) The method of claim 47, further comprising storing the targeted advertisements and the queue.

49. (original) The method of claim 48, wherein a PVR receives the program streams, the targeted advertisements, and the queue, stores the targeted advertisements and the queue, and inserts the targeted advertisements in the program streams based on the queue.

50. (original) The method of claim 24, wherein said presenting the targeted advertisements includes

delivering a plurality of advertisements to each subscriber;

delivering an advertisement profile for each of the plurality of advertisements;

determining if each of the advertisements is applicable by correlating the associated advertisement profile with the subscriber profile,

storing the applicable advertisements;

inserting the applicable advertisements within advertisement opportunities in delivered program streams.

51. (original) The method of claim 50, wherein said inserting includes inserting the applicable advertisements based on a queue.

52. (original) The method of claim 50, wherein said presenting the targeted advertisements is performed by a PVR.

53. (original) A method for targeting advertisements to subscribers of a television delivery system, wherein the targeted advertisements are presented in advertisement opportunities within television program streams, the method comprising

monitoring subscriber interactions with a television;

aggregating the monitored subscriber interactions to generate viewing characteristics that identify traits associated with the subscribers but do not identify raw interaction data;

predicting subscriber traits not related to the subscriber interactions with the television by applying heuristic rules associated with the viewing characteristics;

creating subscriber profiles by combining at least some subset of the viewing characteristics and the subscriber traits;

receiving advertisement profiles that identify traits and characteristics of an intended target market of associated advertisements and a minimum correlation threshold;

correlating the advertisement profiles and the subscriber profiles;

identifying the subscribers meeting the correlation threshold for each of the associated advertisements as a target group; and

targeting the associated advertisements to the target groups.

54. (original) The method of claim 53, wherein the predicted subscriber traits include demographic traits.

55. (original) The method of claim 53, further comprising gathering additional subscriber characteristics from at least one external database, and wherein said creating subscriber profiles includes creating subscriber profiles by combining at least some subset of the viewing characteristics and the subscriber traits with at least some subset of the additional subscriber characteristics.

56. (original) The method of claim 55, wherein said additional subscriber characteristics include at least a subset of purchasing and transaction characteristics.

57. (original) The method of claim 53, further comprising gathering additional subscriber traits from at least one external database, and wherein said creating subscriber profiles includes creating subscriber profiles by combining at least some subset of the

viewing characteristics and the subscriber traits with at least some subset of the additional subscriber traits.

58. (original) The method of claim 57, wherein said additional subscriber traits include at least a subset of demographic and interest traits.

59. (original) The method of claim 53, further comprising gathering deterministic information about subscriber traits and characteristics from the subscribers via questionnaires or surveys, and wherein said creating subscriber profiles includes creating subscriber profiles by combining at least some subset of the viewing characteristics and the subscriber traits with at least some subset of the deterministic information.

60. (original) The method of claim 53, further comprising generating a node profile by averaging the subscriber profiles for each subscriber connected to the node; and wherein

said correlating includes correlating the advertisement profiles and the node profiles; and

said identifying the subscribers includes identifying the nodes meeting the correlation threshold for each of the associated advertisements as a target group.

61. (original) A method for forming groups of subscribers within a television delivery system for the purpose of receiving targeted advertisements within advertisement opportunities in television program streams, the method comprising

retrieving demographic information for subscribers;

associating the demographic information of the subscribers with particular nodes of the television delivery system;

creating a demographic profile of the nodes by averaging the demographic information for each subscriber connected to the node; and

grouping the nodes based on a correlation associated with the demographic node profiles.

62. (original) The method of claim 61, wherein said grouping includes correlating each demographic node profile with each of the other demographic node profiles and combining the nodes having the most similar correlation into groups.

63. (original) The method of claim 61, wherein said grouping includes correlating each demographic node profile with at least one advertisement profile and combining the nodes having the most correlation with each of the at least one advertisement profiles into groups.

64. (original) The method of claim 61, further comprising

retrieving characteristic information about the subscribers;

associating the characteristic information for the subscribers with the nodes of the television delivery system;

creating a characteristic profile of the nodes by averaging the characteristic information for each subscriber connected to the node; and

creating overall node profiles as an aggregation of at least some subset of the node characteristic profiles and the node demographic profiles; and wherein

said grouping the nodes includes grouping the nodes based on a correlation associated with the overall node profiles.

65. (original) The method of claim 64, wherein said retrieving characteristic information about the subscribers includes

monitoring subscriber interactions with a television; and

aggregating the monitored subscriber interactions to generate viewing characteristics that identify traits associated with the subscribers but do not identify raw interaction data.

66. (original) The method of claim 64, wherein the characteristic information includes at least some subset of viewing characteristics, purchase characteristics and transaction characteristics.

67-81. (canceled)

82. (new) The method of claim 1, wherein said generating includes applying the appropriate weighting factor to the subscriber data.

83. (new) The method of claim 82, wherein said weighting factor is assigned according to the source of the subscriber data.

84. (new) The method of claim 82, wherein said weighting factor is assigned according to heuristic rules.

85. (new) The method of claim 1, wherein the subscriber profiles do not contain any private data or raw transaction data.

86. (new) The method of claim 1, wherein the subscriber profiles contain characteristics about the private data or raw transaction data, but do not contain private data or raw transaction data.

87. (new) A computer-implemented method of identifying consumers for an intended target market, the method comprising:

(a) receiving intended target market characteristics for an associated advertisement, the intended target market characteristics including at least one discretionary consumer characteristic;

(b) retrieving computer-stored consumer characteristic data corresponding to a plurality of consumers;

(c) generating consumer characteristics based on at least a subset of the computer-stored consumer characteristic data, wherein the consumer characteristics predict characteristics about the consumers without revealing any private data;

(d) correlating the intended target market characteristics with the consumer characteristics; and

(e) identifying a subset of the consumers that have a sufficient level of correlation between the at least one consumer characteristics and the intended market characteristics, the subset of consumers corresponding to the intended target market.

88. (new) The method of claim 87, wherein said generating includes applying the appropriate weighting factor to the consumer characteristic data.

89. (new) The method of claim 88, wherein said weighting factor is assigned according to the source of the consumer characteristic data.

90. (new) The method of claim 88, wherein said weighting factor is assigned according to heuristic rules.

91. (new) The method of claim 87, wherein the consumer characteristics do not contain any consumer characteristic data.

92. (new) The method of claim 87, wherein the consumer characteristics store generalized characteristics about the consumer characteristic data but not the consumer characteristics data itself.

93. (new) The method of claim 87, wherein said consumer characteristics are probabilistic.
94. (new) The method of claim 87, wherein the consumer characterization data includes consumer purchase data.
95. (new) The method of claim 87, wherein the consumer characterization data includes consumer television interaction data.
96. (new) The method of claim 87, wherein the consumer characterization data includes consumer Internet usage data.
97. (new) The method of claim 87, wherein said retrieving of (b) occurs at a secure profiling server.
98. (new) The method of claim 87, wherein said generating of (c) occurs at a secure profiling server.
99. (new) The method of claim 87, wherein said correlating of (d) occurs at a secure correlation server.